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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/981,360	12/18/1997	Kari Kirjavainen	U 011574-0	3410
7590 07/06/2004				
WILLIAM R. EVANS c/o LADAS & PARRY 26 WEST 61 STREET NEW YORK, NY 10023			EXAMINER BRUENJES, CHRISTOPHER P	
			ART UNIT 1772	PAPER NUMBER

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

08/981,360

Applicant(s)

KIRJAVAINEN ET AL.

Examiner

Christopher P Bruenjes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 6, 2004 has been entered.

***WITHDRAWN REJECTIONS***

2. The 35 U.S.C. 112 rejections of claim 1-12 and 18-20 of record in the Office Action mailed January 27, 2004, Pages 5-6 Paragraph 11, have been withdrawn due to Applicant's amendments in the Paper filed May 6, 2004.

***REPEATED REJECTIONS***

3. The objection to the specification is repeated for the reasons previously of record in the Office Action mailed January 27, 2004, Pages 4-5 Paragraph 10.

4. The 35 U.S.C. 112 rejections of claims 15 and 21 are repeated for the reasons previously of record in the Office Action mailed January 27, 2004, Pages 5-6 Paragraph 11.

5. The 35 U.S.C. 102 rejections of claims 1-2, 5-9, 11-12, 15, and 18-21 as anticipated by Stanley are repeated for the reasons previously of record in Paper #12, Pages 8-9 Paragraph 8, and in the Office Action mailed January 27, 2004, Pages 3-4 Paragraph 7 and Pages 6-7 Paragraph 12.

Regarding the newly added limitation that the foam layer is meltingly extruded rather than melt processible, Stanley teaches that the foam layer is formed by melt extrusion (see abstract).

6. The 35 U.S.C. 103 rejection of claim 10 over Stanley in view of Donuiff is repeated for the reasons previously of record in Paper #12, Pages 11-13 Paragraph 10.

7. The 35 U.S.C. 103 rejections of claims 3-4 over Stanley in view of Bast are repeated for the reasons previously of record in Paper #12, Pages 13-14.

**NEW REJECTIONS**

**Claim Rejections - 35 USC § 112**

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to teach or suggest that the tie layer is made of foamed "melt processible" adhesion plastic. The fact that the specification teaches that the tie layer is extruded or molded does not give a basis for stating that the tie layer is melt processible or thermoplastic, because a thermoset resin can be extruded under the correct conditions.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Stanley (USPN 4,640,313).

Stanley anticipates a tubular product comprising at least three layers, a base layer, an innermost layer made of plastic, the base layer and the innermost layer having poor adhesion to each other, and a tie layer between the base layer and the innermost layer, which is a foamed material (see abstract). The foamed material after foaming hardens to form a tying layer between the base layer and the innermost layer in the 2-layer liner embodiment. The innermost layer and foamed layer after hardening is a permanent lining for the pipe (col.4, 1.50-60). The definition of bonding is to join securely and in this case the foamed plastic by expanding and hardening is joining the innermost layer and base layer securely to form a permanent lining. Note the process limitation that the innermost layer and tie layer are extruded simultaneously is given little patentable weight, because the article claims are defined by structure alone and an extruded foam next to an extruded plastic layer is structurally the same regardless of whether the extrusion is done simultaneously or sequentially. The tie layer contains filler such as copolymerizable ingredients, catalysts,

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or crosslinking agents (col.8, 1.9-30). The innermost layer is oriented by drawing both axially and radially (col.2, 1.31-36). The tie layer is slightly drawn but is dimensionally stabilized finally upon occurrence of such foaming expansion (col.2, 1.36-39). The foamed layer is contiguous with the inner skin layer (see abstract); therefore it is in contact with the innermost layer. Adhesion plastic is determined to define a plastic that is able to adhere. In this case Stanley teaches that the foam is formed from a cross-linked polyethylene, which is known to be adhesive to some substrates, therefore Stanley teaches an adhesion plastic.

#### **ANSWERS TO APPLICANT'S ARGUMENTS**

10. Applicant's arguments regarding the objection to the specification have been fully considered but they are not persuasive.

In response to Applicant's argument that page 5, lines 20-37 of the specification gives support for melt-processible, that paragraph merely states that the plastic layers are extruded but does not state that the plastic is made of a melt-processible plastic. Furthermore, although claim 1 has been amended claims 15 and newly added claim 22 still have the limitation.

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11. It is noted that Applicant provided no remarks regarding the 35 U.S.C. 112 rejections of record and only amended claim 1.

12. Applicant's arguments regarding the 35 U.S.C. 102 rejections of claims 1-2, 5-9, 11-12, 15, and 18-21 have been fully considered but they are not persuasive.

In response to Applicant's argument that Stanley fails to teach the foaming layer as a tying layer or bubble stretching, Stanley teaches that the foam is extruded onto a plastic skin layer and then placed against a base layer. The foam layer is then foamed and hardened to form a layer that fills in and joins the innermost skin layer directly to the base layer (col.4). Tying merely means that the layer is used to bring the layers together and in this case the foam layer is keeping the two layers in contact through the foam layer. Stanley teaches that the foam layer when extruded does not come into contact with the outer wall but after foaming in a radial direction, which would cause the bubbles to stretch, the foam contacts the base layer before hardening.

In response to Applicant's argument that Stanley fails to teach the foam layer is formed of adhesion plastic, adhesion plastic is taken in its broadest meaning to be a plastic that adheres regardless of how strong the adhesion is. A cross-



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linked polyethylene would inherently have some adhesion to certain substrates and therefore is considered an adhesion plastic. Furthermore, the foam layer is bonded to the skin layer because the two layers are floated down the pipe into position and if they were not adhered that would not stay together. Finally, after the foam layer is foamed it is also hardened in contact with the base layer and therefore at least some bond will be formed between the base layer and the hardened foam layer.

In response to Applicant's argument that Stanley fails to teach simultaneous melting extrusion, process limitations are given little patentable weight in article claims because articles are defined by structure alone. The end product of a simultaneous melt extruded article would be the two layers in direct contact with each other that have been extruded. The end product of the sequential melt extruded article of Stanley is also two layers in direct contact with each other that have been extruded. Therefore, structurally the Stanley article anticipates the claimed invention.

In response to Applicant's argument that Stanley fails to teach that the tie layer has better adhesion to the skin and base layers than the base and skin layers have to each other, the foam layer is foamed and hardened after coming into contact

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with the base layer and therefore would inherently have some adhesion the base layer, while the innermost layer would have no adhesion to the base layer. Furthermore, the foam is layer is crosslinked, which would add some adhesion to the foam even if it doesn't strongly adhere to the base layer it would be inherently stronger than the base layer to the innermost layer. Because the innermost layer and foam layer are formed of similar material they would inherently have a stronger adhesion to each other than the innermost layer would have to the base layer.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Adams et al (USPN 6,171,533); Gilleland (USPN 5,042,532); Jan de Putter (USPN 4,754,781); Jameson (USPN 4,535,919).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher P Bruenjes  
Examiner  
Art Unit 1772

CPB

June 30, 2004



  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

7/1/04